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CLAIM AMENDMENTS

1. (Presently Amended) A chair, the chair comprising:

a seat support assembly, the seat support assembly including a seat support and a seat support frame including at least one leg assembly, the seat support frame supporting the seat support, the seat support frame having a left arm and a right arm that are generally coplanar with the seat support; and

a back support assembly, including a back frame and a back support, the back frame including a back frame member,

the back frame member being a single curved member having a central portion lying substantially in the plane of the back support, a left end portion, and a right end portion, the left and right end portions being substantially in the plane of the seat support, the left end portion being aligned with the left arm of the seat support frame and the right end portion being aligned with the right arm of the seat support frame;

a front left spring channel connected to the left arm of the seat support frame;

a back left spring channel connected to the left end portion of the back frame member;

a front right spring channel connected to the right arm of the seat support frame;

a back right spring channel connected to the right end portion of the back frame member;

each of the spring channels having a substantially J-shaped or U-shaped cross-sectional profile with a generally upwardly directed opening, a first side wall, a floor, and a second side wall;

a left spring and a right spring, wherein the seat support frame and the back frame are being flexibly interconnected by a the left spring and a right spring, the left spring engaging with the front left spring channel and the back left spring channel, the right spring engaging with the front right spring channel and the back right spring channel;

each spring being formed from an elongated non-extensible member,

wherein the left spring is connected to the left end portion of the back frame member, and the right spring is connected to the right end portion of the back frame member.

2. (Canceled).

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3. (Presently Amended) The chair of claim 1, wherein the seat support frame includes a U-shaped member ~~having a~~ defining the left arm, a the right arm, and a central portion, the U-shaped member lying substantially in the plane of the seat support, the left arm being substantially parallel to the left end portion of the back frame member, the right arm being substantially parallel to the right end portion of the back frame member.

4. (Original) The chair of claim 3, wherein the left arm is substantially in register with the left end portion of the back frame member, and the right arm is substantially in register with the right end portion of the back frame member.

Claims 5-7. (Canceled)

8. (Presently Amended) The chair of claim 1 7, wherein each spring channel has at least one hole in its floor so as to facilitate secure engagement with an engaged spring.

9. (Presently Amended) The chair of claim 1 6, wherein the left spring is substantially parallel to the left end portion of the back frame member, and the right spring is substantially parallel to the right end portion of the back frame member.

10. (Presently Amended) The chair of claim 1 7, wherein the front left spring channel engages the left spring using a bolt passing through a front left spring keeper and a front left spring hole in the left spring, the bolt engaging with a tapped hole in the floor of the front left spring channel.

11. (Presently Amended) The chair of claim 1 7, wherein the back left spring channel engages with the left spring using a bolt passing through a back left spring keeper and a back left spring hole in the left spring, the bolt engaging with a tapped hole in the floor of the back left spring channel.

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12. (Presently Amended)The chair of claim 1 6, wherein the left spring and right spring both comprise a fiberglass reinforced epoxy resin.

13. (Presently Amended)The chair of claim 1 6, wherein the left spring and right spring both have a substantially rectangular cross-section, the springs flexing within a plane parallel to the shorter sides of the substantially rectangular cross-section.

14. (Presently Amended)A chair frame, comprising:  
a seat support frame adapted to rest on a surface, the seat support frame having at least one leg assembly;

a back frame member having a curved middle portion, a left end portion and a right end portion,

at least one front spring channel interconnected with the seat support frame;

at least one rear spring channel interconnected with the back frame member;

each of the spring channels having a substantially J-shaped or U-shaped cross-sectional profile with a generally upwardly directed opening; and

a left spring, flexibly interconnecting the left end portion of the back frame member and the seat support frame, the spring having a front end interconnected with the front spring channel and a rear end interconnected with the back frame member; and

a right spring, flexibly interconnecting the right end portion of the back frame member and the seat support frame;

wherein the only mechanical connection between the ~~left end portion and right end portion of the back frame member and the seat support frame, apart from through the middle portion of the back frame member,~~ is provided through the ~~left spring, seat support frame, and right spring.~~

15. (Presently Amended)The chair frame of claim 14, wherein the ~~left spring and the right spring are~~ is elongated and non-extensible.

16. (Presently Amended)The chair frame of claim 14, wherein the ~~seat support frame at least one front spring channel~~ includes a left front spring channel and a right front spring channel, the at least one rear spring channel includes a left rear spring channel and a right rear spring

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channel, the spring including a left spring and a right spring, the left front spring channel and left rear spring channel engaging the left spring, and the right front spring channel and right rear spring channel engaging the right spring.

17. (Canceled)

18. (Presently Amended) The chair frame of claim 14 ~~17~~, wherein the left end portion and right end portion of the back frame member are at a back frame bending angle to a back support plane substantially defined by the curved middle portion of the back frame member.

19. (Original) The chair frame of claim 18, where the back frame bending angle is approximately 85 degrees.

20. (Presently Amended) The chair frame of claim 16 ~~17~~, wherein the seat support frame includes a U-shaped member having a central portion, a left arm, and a right arm,

wherein the left arm of the U-shaped member is substantially parallel to and in register with the left end portion of the back frame member,

the right arm of the U-shaped member is substantially parallel to and in register with the right end portion of the back frame member,

the front left spring channel is attached to the left arm of the U-shaped member,

and the front right spring channel is attached to the right arm of the U-shaped member.

Claims 21-25. (Canceled)

26. (Presently Amended) A flexible interconnection for flexibly interconnecting a seat support assembly and a back support assembly of a chair, the flexible interconnection comprising:

a pair of spaced apart front spring channels attached to the seat support assembly;

a pair of spaced apart back spring channels attached to the back support assembly; and

a pair of spaced apart springs, each spring being engaged with one back spring channel and one front spring channel,

wherein both springs are elongated, and

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wherein each spring channel includes a first side, a second side, and a generally horizontal central portion connecting the first side and the second side, so as to define a substantially U-shaped or J-shaped cross-sectional profile defining a spring channel recess that provides spring engagement,

whereby the act of sitting on the seat support assembly and leaning back against the back support assembly causes the back support assembly to tilt backwards due to flexing of each spring.

27. (Original) The flexible interconnection of claim 26, wherein each spring engages with one back spring channel using a back connector, and engages with one front spring channel using a front connector,

each spring having a front hole and a back hole extending therethrough, the front hole receiving the front connector and the back hole receiving the back connector.

28. (Original) The flexible interconnection of claim 26, wherein each spring has a spring length and a transverse cross-section, the transverse cross-section being orthogonal to the spring length, each spring being elongated along the spring length.

29. (Original) The flexible interconnection of claim 28, wherein the transverse cross-section is substantially rectangular, the transverse cross-section being defined by a spring width and a spring thickness, the spring width being greater than the spring thickness,

wherein flexing of each spring is in a flexing plane containing the spring length and spring thickness.

30. (Original) The flexible interconnection of claim 28, wherein at least part of the transverse cross-section is adapted to be received by the substantially U-shaped or J-shaped cross-sectional profile of each spring channel.

31. The flexible interconnection of claim 28, wherein the spring length is greater than 5 inches, the spring width is approximately 2 inches, and the spring thickness is approximately 0.3 inches.

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32. The flexible interconnection of claim 28, wherein each spring comprises fiberglass reinforced epoxy resin.

33. The flexible interconnection of claim 28, wherein each spring channel provides a recess having a recess cross-section that is substantially complementary to at least part of the transverse cross-section of each spring.

34. (Presently Amended) A chair, having a left side, a right side, a front side, a back, a seat support supporting a seat of a person, and a back support supporting a back of the person, the chair comprising:

a seat support assembly, including

a left leg assembly, having a curved left leg member, the curved left leg member having a front left leg portion, a back left leg portion, and a central portion connecting the front left leg portion and the back left leg portion;

a right leg assembly, having a curved right leg member, the curved right leg member having a front right leg portion, a back right leg portion, and a central portion connecting the front right leg portion and the back right leg portion;

a U-shaped member, having a middle portion, a left arm having a left arm end, and a right arm having a right arm end, wherein the left arm is attached to the central portion of the left leg member and the right arm is attached to the central portion of the right leg member so that the middle portion acts to connect the left leg member and the right leg member, and further wherein the U-shaped member substantially defines the plane of the seat support, the seat support being supported by the U-shaped member, and wherein the middle portion of the U-shaped member is proximate to the front of the chair so that the left arm end and the right arm end are proximate to the back of the chair,

a front left spring channel, attached to the left arm of the U-shaped member proximate to the left arm end;

a front right spring channel, attached to the right arm of the U-shaped member proximate to the right arm end;

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the front spring channels each being generally J-shaped or U-shaped with a pair of spaced apart sides interconnected by a generally horizontal central portion;

a back support assembly, including

a back frame formed from a single curved back frame member, the curved back member having a back left frame end and a back right frame end,

a back left spring channel, attached to back frame member proximate to the back left frame end,

a back right spring channel, attached to the back frame member proximate to the back right frame end;

a left spring, connected to the front left spring channel and the back left spring channel; and

a right spring, connected to the front right spring channel and the back right spring channel;

the rear spring channels each being generally J-shaped or U-shaped with a pair of spaced apart sides interconnected by a generally horizontal central portion;

wherein the left spring and right spring act to connect the back frame member to the seat support assembly, the left spring and the right spring allowing the back frame member to flex in relation to the seat support assembly.

35. (Original) The chair of claim 34, further comprising:

a front lateral bar connecting the front left leg portion of the left leg member and the front right leg portion of the right leg member;

a back lateral bar connecting the back left leg portion of the left leg member and the back right leg portion of the right leg member;

a left leg strengthening bar connecting the front left leg portion and the back left leg portion of the left leg member; and

a right leg strengthening bar connecting the front right leg portion and the back right leg portion of the right leg member.

36. (Original) The chair of claim 34, wherein the left spring and the right spring each comprise a non-woven fiberglass reinforced epoxy resin material.

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37. (Original) A chair, comprising  
a seat support assembly including a seat support and a seat support frame, the seat support frame supporting the seat support;  
a back support assembly;  
a flexible interconnection between the seat support assembly and the back support assembly,  
wherein the seat support comprises a central support region and at least one corner piece, the corner piece being flexibly attached to the central support region.

38. (Original) The chair of claim 37, wherein the flexible interconnection between the seat support assembly and the back support assembly comprises a left spring and a right spring, the left and right springs being spaced apart.

39. (Original) The chair of claim 37, wherein the corner piece is flexibly attached to the central support region using flexible plastic.

40. (Original) The chair of claim 37, wherein the seat support comprises a central support region, a back left corner piece, and a back right corner piece,  
wherein the back left corner piece and back right corner piece are each flexibly attached to the central support region,  
the back left corner piece being proximate to the back assembly and a left side of the chair, the back right corner piece being proximate to the back assembly and a right side of the chair.

41. (Original) The chair of claim 40, wherein the seat support includes a cushioned layer, the cushioned layer being supported by the central support region, the back left corner piece, and the back right corner piece,  
wherein the cushioned layer is partially deformable by flexing of the back left corner piece or of the back right corner piece with respect to the central support region.

42. (Original) The chair of claim 40, wherein the central support region and corner pieces are formed from a rigid material.



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43. (Original) The chair of claim 40,

wherein the flexible interconnection between the seat support assembly and the back support assembly comprises a left spring and a right spring, the left and right springs being spaced apart,

wherein the back left corner piece is proximate to the left spring, and the back right corner piece is proximate to the right spring,

whereby the danger of pinching between the seat support and another proximate part of the chair is reduced.